

CLAIM AMENDMENTS

1.(Withdrawn) A communication routing apparatus comprising:-

input transmission line means;

output transmission line means;

input processing means for processing signals received within said communication routing apparatus from the input transmission line means into an intermediate form having predetermined characteristics, the processing of each signal being dependent on its source;

output processing means for processing said signals in said intermediate form within said communication routing apparatus, produced by the input processing means, into signals in selected forms, the processing of each signal being dependent on its destination; and

transmission means for transmitting signals from said communication routing apparatus, produced by the output processing means, via the output transmission line means to their destinations.

2. (Withdrawn) An apparatus according to claim 1, including means storing a plurality of input signal processing mapping definitions, wherein the input processing means is configured to select an input signal processing mapping definition in dependence on the source of the signal being processed and process said signal according to the selected input signal processing mapping definition to convert said signal into said intermediate form.

3. (Withdrawn) An apparatus according to claim 1, including means storing a plurality of output signal processing mapping definitions, wherein the output processing means is configured to select an output signal processing mapping definition in dependence on the destination of the signal being processed and process said signal according to the selected output signal processing mapping definition to convert said signal into the form required according to its destination.

4. (Withdrawn) An apparatus according to claim 1, including storage means for storing signals produced by the input processing means, wherein the output processing means reads signals in said intermediate form from the storage means before processing them.

5. (Withdrawn) An apparatus according to claim 1, including storage means for storing signals, received by the input processing means, so as to maintain a record of received signals.

6. (Withdrawn) An apparatus according to claim 2, wherein the input processing means is adapted to determine the source of a received signal from a buffer location from which it is taken for processing and select the appropriate input mapping definition in dependence thereon.

7. (Withdrawn) An apparatus according to claim 6, wherein the input processing means is adapted to produce a plurality of signals in said intermediate form from a received signal comprising one transmission session.

8. (Withdrawn) An apparatus according to claim 3, wherein the output signal processing means is adapted to obtain a signal destination id from each intermediate form signal being processed and select the appropriate output mapping definition in dependence thereon.

9. (Withdrawn) An apparatus according to claim 8, wherein the output signal processing means is configured to send its output signals to buffer means selected in dependence on the destinations thereof.

10. (Withdrawn) An apparatus according to claim 2, wherein the input processing means is configured to apply the selected input mapping definitions to perform data format conversions on data represented by said received signals.

11. (Withdrawn) An apparatus according to claim 10, wherein the input processing means is configured to add data to that represented by said received signals.

12. (Withdrawn) An apparatus according to claim 3, wherein the output processing means is configured to apply the selected output mapping definitions to perform data format conversions on data represented by said intermediate form signals.

13. (Withdrawn) An apparatus according to claim 1, wherein the input and output signals represent data files.

14. (Withdrawn) An apparatus according to claim 1, wherein the intermediate format signals represent data in tables of a database.

15. (Withdrawn) An apparatus according to claim 14, wherein each table comprises data from a plurality of input signals and each input signal provides data for a plurality of tables of said database.

16.(Cancelled)

17. (Withdrawn) An apparatus according to claim 1, configured to process signal in layer of the OSI networking reference model.

18.(Currently Amended) An invoice routing apparatus comprising:
invoice receiving means for receiving a plurality of invoices;

input processing means for processing the plurality of received invoices within said invoice routing apparatus, each invoice converted by said input processing means into an intermediate invoice in a form having predetermined characteristics determined in dependence on an identity of a sender of the invoice, ~~the processing of each invoice being dependent on the an identity of the a raiser of the invoice;~~

output processing means for ~~processing said invoices in~~ converting each of said intermediate form invoices, ~~produced by the input processing means, within said input routing apparatus, into invoices in selected forms, the processing of each invoice in said intermediate form being dependant on the~~ into a final invoice in a form selected in dependence on an identity of the a party being invoiced; and

invoice transmission means for transmitting each of the final invoices, ~~produced by the output processing means~~ from said invoice routing apparatus to each party being invoiced ~~their destinations.~~

19.(Currently Amended) An apparatus according to claim 18, ~~including further comprising means for~~ storing a plurality of input invoice mapping definitions, ~~wherein the input processing means is configured to select~~ selecting an input invoice mapping definition in dependence on the ~~raiser~~ sender of the each received invoice and using ~~being processed and process said invoice according to the selected input invoice mapping definition to convert~~ when converting said received invoice into said intermediate invoice ~~form.~~

20.(Currently Amended) An apparatus according to claim 18, including further comprising means for storing a plurality of output invoice mapping definitions, wherein the output processing means is configured to select an output invoice mapping definition in dependence on the party being invoiced and process said invoice according to using the selected output invoice mapping definition to convert when converting said signal intermediate invoice into said final invoice the form required by the party being invoiced.

21.(Currently Amended) An apparatus according to claim 18, including further comprising storage means for storing said intermediate form invoices produced by the input processing means, wherein the said output processing means reads receiving said intermediate invoices in said intermediate form from the storage means before processing them.

22.(Currently Amended) An apparatus according to claim 18, including further comprising storage means for storing the plurality of received invoices, received by the input processing means, so as to maintain a record of received invoices.

23.(Currently Amended) An apparatus according to claim 19, wherein the input processing means is adapted to determine the identifies a source of a received invoice, the source being from a buffer location from which it is taken for processing and select

~~the appropriate~~ selects an input invoice mapping definition in dependence on the source ~~thereon~~.

24.(Currently Amended) An apparatus according to claim 23, wherein the input processing means ~~is adapted to produce~~ produces a plurality of intermediate invoices in ~~said intermediate form from~~ in correspondence to a collection of invoices received together.

25.(Currently Amended) An apparatus according to claim 18, wherein the output processing means ~~is adapted to obtain~~ obtains an invoice destination ~~id~~ identification from each intermediate ~~form~~ invoice ~~being processed~~ and ~~select the appropriate~~ selects an output invoice mapping definition in dependence on the invoice destination identification ~~thereon~~.

26.(Currently Amended) An apparatus according to claim 25, wherein the output processing means is configured to send ~~its output~~ the final invoices to a buffer means selected in dependence on the invoice destination identification ~~destinations thereof~~.

27.(Currently Amended) An apparatus according to claim 19, wherein the input processing means ~~is configured to apply~~ uses the selected input invoice mapping definitions to perform data format conversions on data derived from said received invoices ~~represented by said received signals~~.

28.(Currently Amended) An apparatus according to claim 27, wherein the input processing means is configured to incorporate additional ~~add~~ data with said data derived from said received invoices ~~to that represented by said received invoices~~.

29.(Currently Amended) An apparatus according to claim 20, wherein the output processing means ~~is configured to apply~~ uses the selected output invoice mapping definitions to perform data format conversions on data derived from said intermediate ~~form~~ invoices.

30.(Currently Amended) An apparatus according to claim 18, wherein the received invoices and the final transmitted invoices are ~~represented by~~ comprised of data files.

31.(Currently Amended) An apparatus according to claim 18, wherein the intermediate ~~form~~ invoices are ~~represented by~~ comprised of data placed in tables and stored in ~~of~~ a database.

32.(Currently Amended) An apparatus according to claim 31, wherein each table ~~comprises~~ contains data from a plurality of ~~input signals~~ received invoices and each ~~input signal~~ received invoice provides data for a plurality of tables of said database.

33.(Currently Amended) An invoice routing method for routing an invoice over a network having a transmitter, a router and a receiver, said method comprising:
transmitting an invoice from said transmitter to said router;
receiving said ~~an~~ invoice at said router, ~~said invoice being transmitted from said transmitter;~~
electronically ~~processing~~ converting said received invoice ~~within said router~~ into an intermediate invoice in a form having predetermined characteristics, ~~said processing depending~~ determined in dependence on ~~the~~ an identity of ~~the~~ a raiser sender of the invoice;
electronically processing said intermediate ~~form~~ invoice within said router into ~~an~~ a secondary invoice in a secondary form selected in ~~dependence on the~~ according to relation to an identity of ~~the~~ a party ~~receiving said invoice~~ being invoiced; and
sending said secondary invoice from said router ~~in said selected for secondary form to a pre-selected receiver its destination.~~

34.(Currently Amended) A method according to claim 33, ~~including~~ further comprising storing a plurality of input invoice mapping definitions and selecting an invoice mapping definition from said stored input invoice mapping ~~definition~~ definitions for use in said electronic processing of said received invoice ~~in dependence on the raiser of said invoice.~~

35.(Currently Amended) A method according to claim 33, ~~including~~ further comprising storing a plurality of output invoice mapping definitions and selecting an output invoice mapping definition from said stored output invoice mapping definitions for ~~using in~~ said electronic processing of said received invoice in dependence on the party being invoiced.

36.(Currently Amended) A method according to claim 33; further comprising storing said intermediate ~~form~~ invoice in a storage location and ~~reading~~ retrieving said intermediate ~~form~~ invoice from said storage location ~~where it has been stored before~~ electronic processing of said intermediate invoice it into said selected form.

37.(Currently Amended) A method according to claim 33; further comprising storing said received invoice ~~as received~~ in a received invoice archive.

38.(Currently Amended) A method according to claim 34, wherein the electronic processing of said received invoice comprises determining ~~a~~ the source of said received invoice from a buffer location ~~from which it is taken for processing~~ and selecting ~~the appropriate~~ an input invoice mapping definition in dependence on the source thereof ~~thereon.~~

39.(Currently Amended) A method according to claim 35, wherein the electronic processing of said intermediate ~~form~~ invoice comprises obtaining an invoice destination

id identification therefrom and selecting ~~the appropriate~~ an output invoice mapping definition in dependence on the invoice destination identification ~~thereon~~.

40.(Currently Amended) A method according to claim 39, wherein the output processing means is configured to send ~~the secondary its output~~ invoices to buffer means selected in dependence on the invoice destination identification ~~destinations~~ thereof.

41.(Currently Amended) A method according to claim 34, wherein the processing of said received invoice comprises ~~apply~~ using the selected input invoice mapping definitions to perform a data format conversion on data derived from said received invoice.

42. (Currently Amended) A method according to claim 41, wherein the electronic processing of said received invoice includes adding data to said data derived from said received invoice.

43. (Currently Amended) A method according to claim 35, wherein the processing of said intermediate ~~form~~ invoice comprises ~~applying~~ using the selected output invoice mapping definition to perform data format conversions on data derived from said intermediate ~~form~~ invoice.

44. (Currently Amended) A method according to claim 33, wherein the received and transmitted invoices are ~~represented by~~ comprised of data files.

45. (Currently Amended) A method according to claim 33, wherein said intermediate ~~form~~ invoice comprises data placed in tables and stored in ~~of~~ a database.

46. (Currently Amended) A method according to claim ~~45~~ 44, wherein each table ~~comprises~~ contains data ~~from a plurality of tables of said database~~ data from a plurality of received invoices and each received invoice provides data for a plurality of tables of said database.